REMARKS

In the Final Office Action mailed 15 March 2010, the Examiner reviewed claims 1-7, 9-15 and 31-35. The Examiner has rejected all pending claims under 35 U.S.C. §103(a).

Claims 1-7, 9-15 and 31-35 will remain pending after entry of this amendment.

Rejection of Claims 1-2, 8 and 31 under 35 U.S.C. §103(a)

Claims 1-2, 8 and 31 are rejected under 35 U.S.C. §103(a) as being unpatentable over Makita (US 20010050101), McArthur (US 4,184,476) and Hartman (US 2,873,698).

Rejection of Claim 13 under 35 U.S.C. §103(a)

Claims 13 is rejected under 35 U.S.C. §103(a) as being unpatentable over Makita, McArthur and Hartman as applied to claim 1.

Rejection of Claims 3-5, 7 and 14 under 35 U.S.C. §103(a)

Claims 3-5, 7 and 14 are rejected under 35 U.S.C. §103(a) as being Makita, McArthur and Hartman as applied to claim 1, in view of Gauvin (US 6,130,781).

Rejection of Claims 3-7 under 35 U.S.C. §103(a)

Claims 3-7 are rejected under 35 U.S.C. §103(a) as being unpatentable over Makita, McArthur and Hartman as applied to claim 1, in view of Berman (US 4,663,085 as cited in the IDS).

Rejection of Claims 9, 12, 32 and 35 under 35 U.S.C. §103(a)

Claims 9, 12, 32 and 35 are rejected under 35 U.S.C. §103(a) as being unpatentable over Makita, McArthur and Hartman as applied to claims 1 and 31, respectively, in view of Mori (US 6,218,609).

Rejection of Claims 9, 12, 32 and 35 under 35 U.S.C. §103(a)

Claims 9, 12, 32 and 35 are rejected under 35 U.S.C. §103(a) as being unpatentable over Makita, McArthur and Hartman as applied to claims 1 and 31, respectively, in view of Christensen (US 20050061311).

Rejection of Claims 10 and 33 under 35 U.S.C. §103(a)

Claims 10 and 33 are rejected under 35 U.S.C. §103(a) as being unpatentable over Makita, McArthur and Hartman as applied to claim 8, in view of Berman and Samuelson (US 4,692,557).

Rejection of Claims 11 and 34 under 35 U.S.C. §103(a)

Claims 11 and 34 are rejected under 35 U.S.C. §103(a) as being unpatentable over Makita, McArthur and Hartman as applied to claims 8 and 31, respectively, in view of Nath et al. (US 5,968,287 as cited in the IDS).

Rejection of Claim 15 under 35 U.S.C. §103(a)

Claim 15 is rejected under 35 U.S.C. §103(a) as being unpatentable over Makita, McArthur and Hartman as applied to claim 1, in view of McDonough (US 6606823 as cited in the IDS).

The Cited Art

The **Mikita** patent publication shows, at figure 2, a roof type support structure including sheathing roof board 2207 covered by a waterproof roofing membrane 2206. A solar cell module 2001 is supported on membrane 2206/roof board 2207 by spacers 2205 using fixing members 2203 and screws 2204. Solar cell modules and solar cell-free modules can be arranged to be situated next to one another on, for example, a carport. (¶ ¶ [0006], [0097])

Figure 9 of Makita is a schematic view illustrating the constitution of an example of a solar cell module used with the invention. (¶ [0036]) A solar cell string 401 is made in a conventional manner by forming of amorphous solar cells on a 0.1 mm thick stainless steel substrate using plasma CVD. (¶ [0106]) The solar cell module of figure 9 is a multilayered structure including a reinforcing member 406, "a multi-layered back side film 45, the foregoing solar cell string 401, a surface side protective and reinforcing number 404, a surface side sealing member 403, and a light transmissive surface protective member 402, whereby a stacked body was obtained." (¶ [0108])

The **MacArthur** patent discloses a building 15 including a foundation 17 from which vertical columns 16 extend to partially form the sides of the building. Rafters 18 extend at an angle from the top of columns 16 to partially form the roof. Horizontal wall and roof purlins 20

are mounted to columns 16 and rafters 18 forming the basic framework for building 15. External wall and roof panels 22 are mounted on the wall and roof purlins 20 to form the building walls and roof. At selected positions along the typically south facing walls and roof, solar energy collectors 24 are used to replace wall and roof panels 22. Solar energy collectors 24 include a transparent exterior panel 28, an interior panel 50 and a thermal solar energy absorbing panel 30 therebetween. The panels 30, 50 and purlins 20 form a heated air passageway. As shown in figures 9 and 11, air from the interior of building 15 passes through an inlet grill 54, through the heated air passageway, through an air duct 55 and back into the room through a blower 56.

The **Hartman** patent discloses a carport structure having four columns 24, 26 supporting a roof including a roof frame (elements 10-13 plus cross beams 15, 16) supporting roof sheets 20. (1/64-70)

The Cited Art Distinguished

Independent claim 1 is distinguishable over the art for at least the following reasons.

1. In the prior Response mailed 1 December 2009, Applicants stated the following.

> The Examiner is taking the position that solar cell string 401 is a PV panel. However, solar cell string 401 is not a PV panel. The PV panel of Makita is the entire structure shown in figure 9, not the 0.1 mm thick stainless steel substrate with CVD deposited amorphous silicon solar cells. Stating that the 0.1 mm thick stainless steel substrate with a layer of amorphous silicon cells electrically connected in series to form the solar cell string 401 constitutes a solar cell module is simply incorrect. It is incorrect by virtue of the teaching of Makita, which refers to the entire structure of figure 9 as a solar cell module (that is, a PV panel). (¶ [0105]) It is also incorrect because one of ordinary skill in the art, reading the claim in light of the specification, would never consider a string of amorphous silicon cells, created by depositing amorphous silicon on a 0.1 mm thick stainless steel substrate, to constitute a PV panel; rather it constitutes a part of a PV panel.

Apparently at least partially in response to the above arguments, the Examiner at pages 12-13 of the Final Office Action stated ""Solar panel" is defined as "a group of connected solar cells" and solar cell is defined as "a photovoltaic cell which converts sunlight to direct energy" (see attached definitions)." Based upon this definition, the Examiner concluded that the solar cell string 401 of Makita constitutes a PV panel. As discussed below, both the definition and the conclusion are in error.

> It is well established that terms in a claim are given the meaning based upon what one of ordinary skill in the art would give it. MPEP 2111.01 (III). Guidance in this area is given by the following case. ***In Re Suitco Surface, Inc.***, No. 2009-1418 (Fed. Cir. Apr. 14, 2010) ruled that although claims are to be

> given their broadest reasonable construction, the broadest reasonable construction must be "consistent with the specification and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art." The court found that "The broadest-construction rubric coupled with the term "comprising" does not give the PTO an unfettered license to interpret claims to embrace anything remotely related to the claimed invention. Rather, claims should always be read in light of the specification and teachings and the underlying patent."

Therefore, the broadest reasonable construction of claim terms must be **consistent with the specification** and the claim language as read in light of the specification. In this case, Applicants submit that the Examiner has ignored the specification in determining the meaning one of ordinary skill in the art would give to the element "PV panel". Based upon the use of this term throughout the application, one of ordinary skill in the art would not consider solar cell string 401 of Makita to be a PV panel. For example, paragraph [0026] states in part "The above disclosed embodiments disclose the use of conventional PV panels 20. If desired, PV panels 20 could be a light concentrator type." See also PV panels 20 shown in figures 2, 4 and 10. Accordingly, the interpretation of "PV panel" given by the Examiner is incorrect.

2. In the prior Response mailed 1 December 2009, Applicants also stated the following.

> Therefore, properly understood, there is no space between the PV panel of figure 9 Mikita and what the Examiner considers to be protective panels 1202, 1303. It would not have been obvious to modify Makita to provide an open region between panels 1202, 1303 and the PV module because panels 1202, 1303 are used to support the PV module.

Regarding this aspect, the Examiner, on page 13 of the Final Office Action states "nor does Applicant require that the spaced apart relationship results in a void/air space between the two panels." Solely to expedite prosecution, independent claims 1 and 31 have been amended to clarify this feature, which Makita neither discloses nor suggests.

Accordingly, **independent claim 1** is allowable over the cited art.

Independent claim 31 is allowable for the same basic reasons as is claim 1.

The **dependent claims** are direct to specific novel subfeatures of the invention and are allowable for that reason as well as by depending from novel parent claims. Specific examples are described below.

With regard to **claims 10 and 33**, the Examiner has stated that it would have been obvious "to use the transparent module of Berman with the protective backing of Samuelson in MacArthur ... ." However, the polymer or glass back 30 of Samuelson is part of the PV modules; it is not a separate, spaced apart panel. Also, Samuelson neither discloses nor suggests that it is a protective panel. Rather, it is stated to be a polymer or glass back 30 in contact with the solar cell. There is nothing in Samuelson suggesting that polymer or glass back 30 would be suitable as a protective backing. Any impact against back 30 would be transmitted directly to the solar cell with possible damage to the solar cell. In addition, such impact could possibly break back 30 and damage the solar cell, especially if back 30 is made of glass. Therefore, there is nothing in Samuelson to suggest using an additional protective panel, much less a protective panel (1) constructed to permit some light to pass therethrough, and (2) spaced apart from the solar cell module.

As to **claims 11 and 34**, the Nath patent discloses an architectural panel 10 having a photovoltaic generator device 12 laminated onto a generally concave central portion 14 of panel 10. Portion 14 is not spaced apart from device 12 and could not be spaced apart from device 12 because it acts as the support for the device. Even assuming, for the sake of discussion, that at least one of the cited art references (Mikita, MacArthur and Hartman) discloses a protective panel, it would not have been obvious to make that protective panel convex when viewed from below in light of Nath because the convex structure of Nath is not used as a protective panel but rather as the basic support for the lamination of photovoltaic generator device 12.

CONCLUSION

It is respectfully submitted that this application is now in condition for allowance, and such action is requested. If the Examiner believes a telephone conference would aid the prosecution of this case in any way, please call the undersigned at (650) 712-0340.

The Commissioner is hereby authorized to charge any fee determined to be due in connection with this communication, or credit any overpayment, to our Deposit Account No. 50-0869 (PWRL 1029-3).

Respectfully submitted,

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/James F. Hann/

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